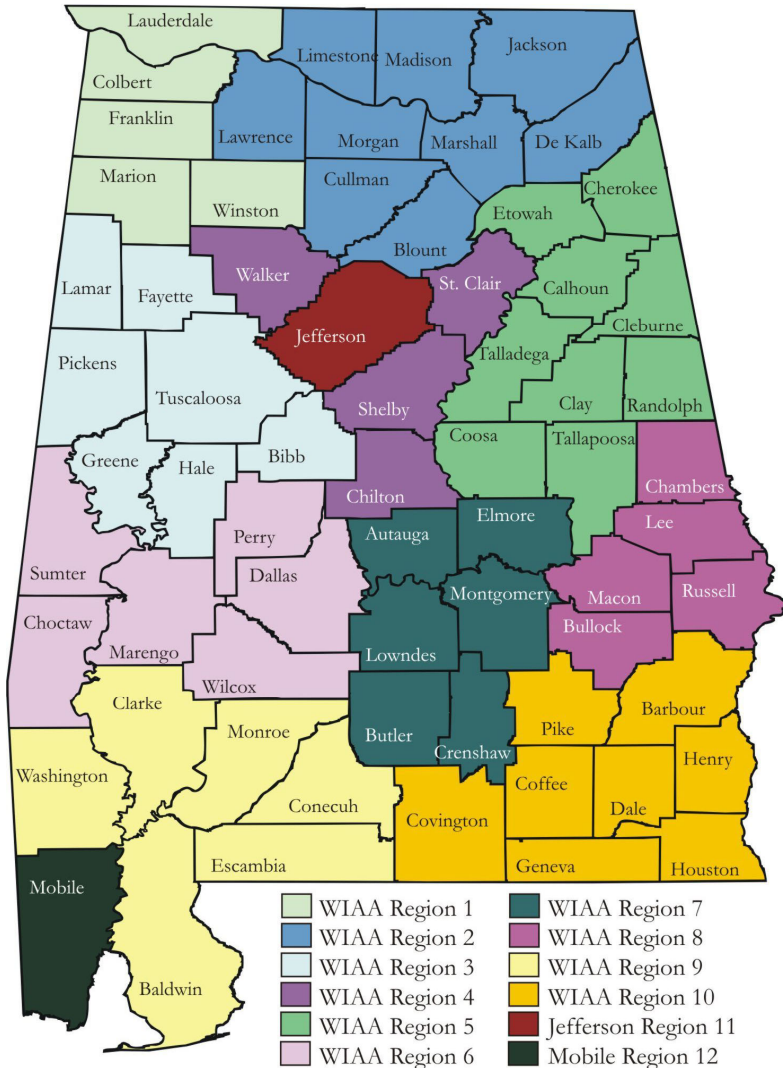
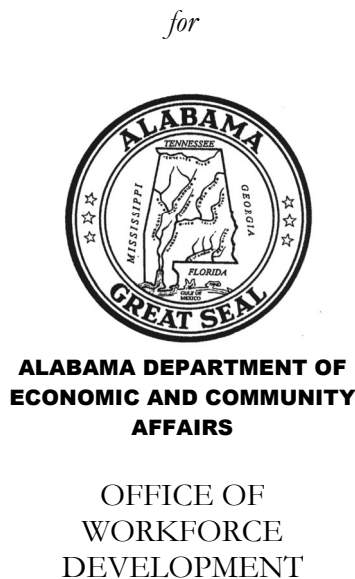


# State of the Alabama Workforce I

## Workforce Investment Advisory Areas



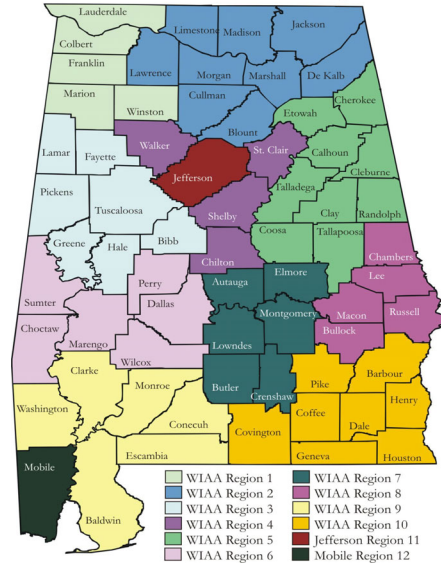
*December 2005*

**Center for Business and Economic Research**  
THE UNIVERSITY OF ALABAMA



# State of the Alabama Workforce I

Workforce Investment Advisory Areas



*December 2005*

*by*

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## STATE OF ALABAMA

January 24, 2006

Dear Workforce Development Partner:

On December 30, 2003, I issued Executive Order 17 creating the Office of Workforce Development and charged the Office with providing leadership to the creation of a more integrated and effective public workforce development system. Subsequently, our workforce partners developed Alabama's first comprehensive strategic plan for workforce development and immediately began implementing it. As a result of that implementation, many improvements have been made.

One such improvement has to do with our plan's goal to make our system more demand-driven. That is, we want to better respond to businesses' workforce needs. In order to do so, we must have current, reliable labor market information. We must benchmark our progress as we move forward. This first State of the Workforce Report provides the foundation for that effort.

As I have said many times, Alabama's workforce is its greatest economic development asset. As job skill demands escalate, we must work together to educate and train our current and future workforce to meet those demands.

I thank you for your involvement in that process and look forward to our continuing this important work.

Sincerely,

A handwritten signature in black ink that reads "Bob Riley". The signature is stylized, with the first letters of the first and last names being capitalized and prominent.

BR/sl/lm

OFFICE OF THE GOVERNOR

**BOB RILEY**  
GOVERNOR



OFFICE OF WORKFORCE DEVELOPMENT

**DR. TIM ALFORD**  
DIRECTOR

**STATE OF ALABAMA**

January 24, 2006

Dear Workforce Development Partner:

There is a growing state and national realization and consensus that workforce development equals economic development. As Alabama's unemployment shrinks and the skill demands of twenty-first century jobs expand, our workforce and economic development partners must come together to work more effectively than ever.

I am pleased to report that Alabama is doing just that! The fact that a report on workforce development is being included as part of this Economic Development Conference gives additional testimony to this trend.

I want to thank Phyllis Kennedy, Doug Dyer and the Labor Market Information staff at the Department of Industrial Relations as well as Carl Ferguson, Nisa Miranda and Sam Addy of the University of Alabama for their excellent work on the development of this initial report. I am also appreciative of the Regional Workforce Advisory Councils' input and important contributions. We will continue to work together to improve subsequent editions as we benchmark our progress in moving our state's workforce forward.

Thank you for being a part of this important initiative.

Sincerely,

Tim Alford  
Director

## Acknowledgments

Completion of this project was due to the timely contributions of many people. We are very grateful to the officers, staff, and members of the following:

- Alabama Department of Industrial Relations
- Alabama Department of Economic and Community Affairs
- Institute for Social Science Research, The University of Alabama
- Job Forecasting and other Workforce Committees
- Labor Market Information Division of the Alabama Department of Industrial Relations
- Regional Advisory Councils of the Workforce Investment Advisory Areas
- University Center for Economic Development, The University of Alabama

Many thanks also to our colleagues at the Center for Business and Economic Research for their help on different phases of this research project. Last, but not least, much gratitude is owed to the thousands of Alabamians who respond to surveys on workforce and related issues, and thereby provide the critical data required in reports of this kind.





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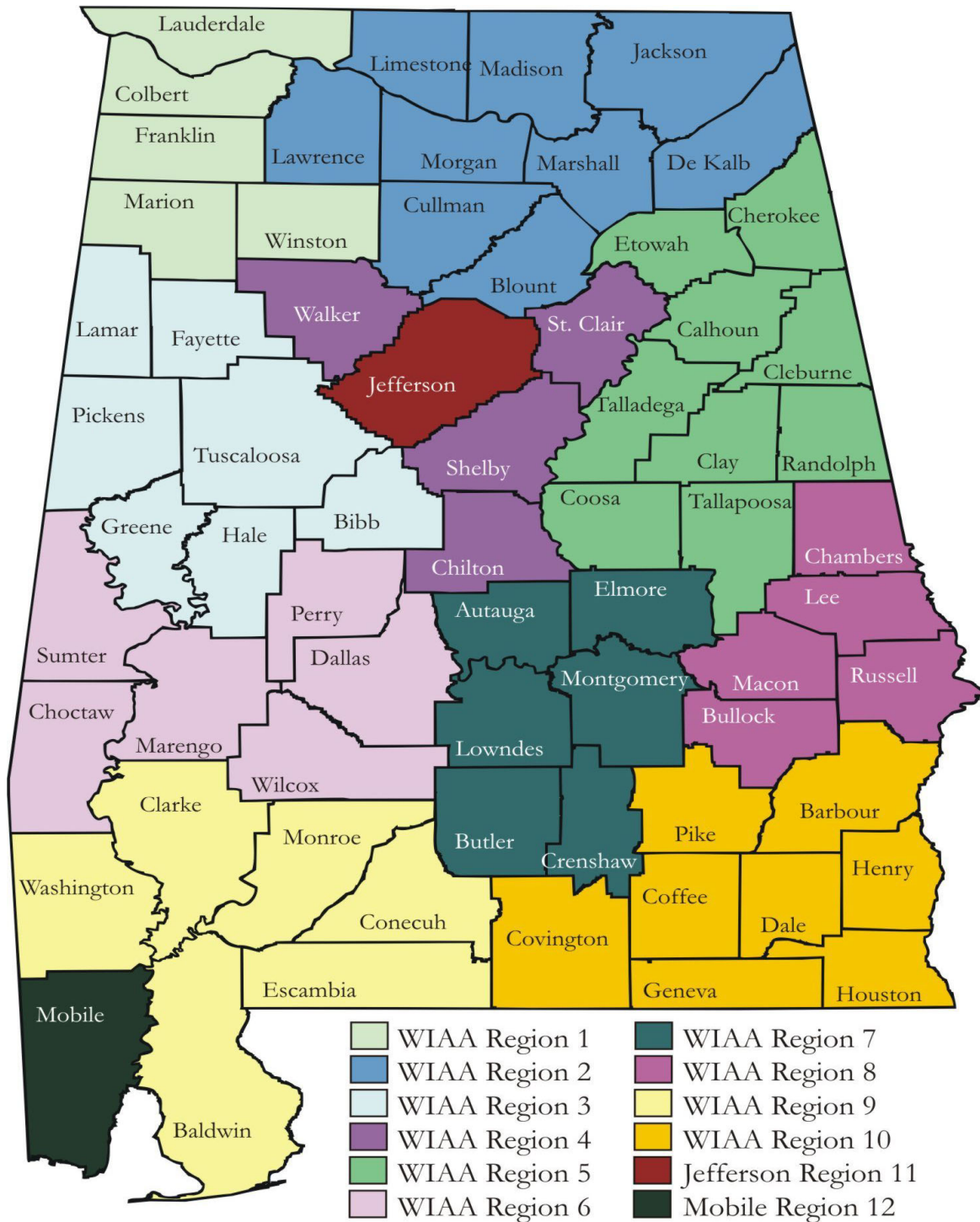
## Executive Summary

- This document contains state of the workforce reports for Alabama and each of the state's local workforce investment areas and workforce regional advisory council areas. For the purposes of this report, the substate workforce investment areas are referred to as workforce investment advisory areas (WIAAs). The reports analyze supply, demand, and other issues regarding the workforce for the state and each WIAA, using available metrics of workforce characteristics.
- Alabama had a low 4.2 percent unemployment rate in August 2005, with 90,217 unemployed. However, the state has a large 586,000-strong available labor pool that is looking for better jobs and includes 495,700 underemployed workers. The underemployed are willing to commute farther and longer, some for 20 or more minutes longer and 20 or more extra miles.
- In 2000, 78,200 Alabamians commuted out of the state for work, compared to 41,500 in-commuters. Eighty-five percent of commuter inflow and 86 percent of outflow involved the four neighboring states; Florida, Georgia, Mississippi, and Tennessee. Georgia alone provided jobs for 51 percent of Alabama out-commuters. Significant commuting inside the state suggests that the state's roads and highways must be maintained properly to ensure uninterrupted movement of workers. Impeded movement of workers can delay or slow down economic development.
- Educational attainment in Alabama is low compared to the nation as a whole. Of the age 25 and over population, Alabama has 75 percent high school graduates and 19 percent bachelor's or higher degree holders, compared to 80 percent and 24 percent, respectively, for the nation.
- Employment is currently growing faster than the labor force and population. Workforce development initiatives that address this challenge might consider (i) focusing on hard-to-serve populations, (ii) facilitating in-commuting, and (iii) helping communities gain new residents. Increasing the number of residents is generally more beneficial to communities and the state. However, communities must be prepared to invest in amenities and infrastructure to support such growth. Hard-to-serve populations are often outside of the mainstream economy, poor, and have difficulty finding work (e.g. out-of-school youth). They are potential labor force participants and some investment in training, transportation, child care, infrastructure, etc. may be needed to tap this resource.
- By sector, the top five employers in the state are manufacturing, retail trade, health care and social assistance, educational services, and accommodation and food services. These five industries provided 1,042,134 jobs about 58 percent of the state total in the second quarter of 2004. These leading employers are not the highest paying sectors; only manufacturing had wages that were above the state averages for new hires and incumbent workers.
- On average about 94,800 jobs were created per quarter from second quarter 2001 to second quarter 2004; quarterly net job flows averaged about 6,700. Job creation is the number of new jobs that are created either by new area businesses or through expansion of existing firms. Net job flows reflect the difference between current and previous employment at all businesses.

- The top five high-demand occupations are Cashiers; Retail Salespersons; Food Preparation and Serving Workers; Waiters and Waitresses; and Laborers and Freight, Stock, and Material Movers, Hand.
- The top five fast-growing occupations are Medical Assistants; Veterinary Technologists and Technicians; Home Health Aides; Medical Records & Health Information Technicians; and Network Systems and Data Communications Analysts.
- Four occupations are both high-demand and fast-growing: Home Health Aides; Counter and Rental Clerks; Receptionists and Information Clerks; and Security Guards.
- The top 50 highest earning occupations are in health, legal, management, engineering, computer, and science fields. The top 10 are all health occupations (e.g. anesthesiologists, orthodontists, surgeons). Almost all high-earning occupations require bachelor's or higher degrees.
- Fast-growing or high-demand occupations are generally not high-earning. Of 36 selected high-demand, 35 selected fast-growing, and 50 selected high-earning occupations, only one high earning occupation, General and Operations Managers, is in the high-demand category. Three occupations are both fast-growing and high-earning: Pharmacists; Computer Software Engineers, Systems Software; and Computer Software Engineers, Applications.
- The most relevant skills for high-demand and fast-growing occupations are basic: active listening, reading comprehension, speaking, writing, and service orientation. High-demand and high-growth occupations are also common to the lower wage leading employment sectors. Economic development should aim to diversify and strengthen the state's economy by retaining, expanding, and attracting more high-wage providing industries.
- The finding that basic skills are important—for high-demand, high-growth, and high-earning jobs—indicates a strong need for training in these skills. Ideally, all high school graduates should possess basic skills so that postsecondary and higher education can focus on other and more complex skills as well as enhancing these basic skills. Employers should be an integral part of planning for training as they can help identify future skill needs and any existing gaps.
- Skill and education requirements for jobs keep rising, strongly emphasizing the need to raise educational attainment in the state, and presenting challenges to workforce development. They also present opportunities for economic development through workforce development activities that involve postsecondary and higher education institutions. Higher incomes to graduates from these institutions would help to raise personal income for the state. Raising personal income by improving educational attainment for a state that has low population and labor force growth rates is an effective economic development strategy.
- A highly educated and productive workforce is a critical economic development asset. Together, workforce development and economic development can provide this asset and build a strong well-diversified state economy. Indeed, one cannot achieve success without the other.

## Alabama Workforce Report

### Workforce Investment Advisory Areas



# Alabama Workforce Report

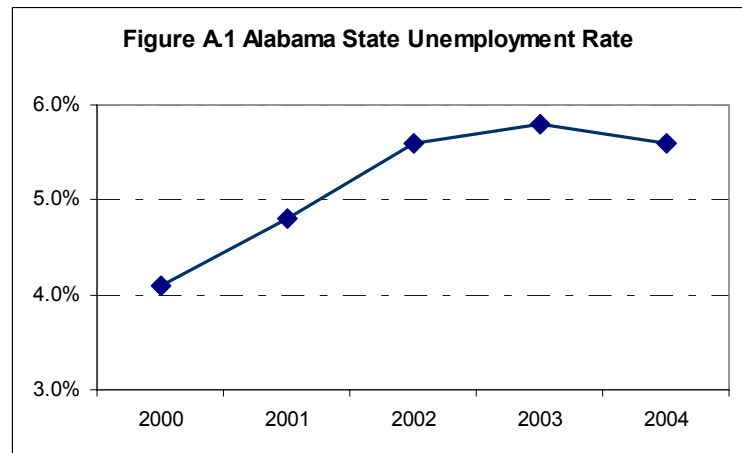
## Workforce Supply

### Labor Force Activity

The labor force includes all persons in the civilian noninstitutional population who are age 16 and over and who have, or are actively looking for, a job. Typically, those who have no job and are not looking for one are not included (e.g. students, retirees, and the disabled). Table A.1 shows labor force information for Alabama and each workforce investment advisory area (WIAA) in the state for 2004 and August 2005.<sup>1</sup>

Significant employment gains relative to labor force growth in 2005 have lowered unemployment rates for the state and all WIAAs. Unemployment rates in 2004 ranged between 4.2 percent and 9.2 percent for the WIAAs, with 5.6 percent for the state. The August 2005 range for unemployment was 3.2 percent to 7.9 percent, with a 4.2 percent rate for the state. The unemployment rate was lowest in WIAA Region 4 and highest in Region 6. The nine-county Region 2 area has the largest labor force and the second smallest unemployment rate. WIAA Region 6, with the smallest labor force, has the highest unemployment rate.

Annual state unemployment rates for 2000 to 2004 are shown in Figure A.1. Unemployment rose from 4.1 percent in 2000 when the labor market statewide and nationwide was tight. The higher 2001-2003 rates reflect the effects of the national economic recession of 2001. Employment gains since 2003 have sent unemployment downward. A 20,000-job increase in the state's employment was recorded for 2004. An even higher job gain is expected for 2005. Monthly labor force data for 2005 suggest that a sharper decline in the state unemployment rate will be recorded for 2005.



Source: Alabama Department of Industrial Relations.

Alabama employment averaged a little less than 1.8 million quarterly from the second quarter of 2001 to third quarter 2004 (Figure A.2). The low point was recorded in the first quarter of 2003 but Table A.1 shows that employment has recovered strongly and currently exceeds 2.0 million. Employment refers to the number of full-time and part-time jobs. Economic activity is spurring employment growth and this is expected to continue for the next couple of years.

<sup>1</sup> Alabama labor force information is available from the Labor Market Information (LMI) Division of the Alabama Department of Industrial Relations. LMI compiles labor data in cooperation with the U.S. Bureau of Labor Statistics.

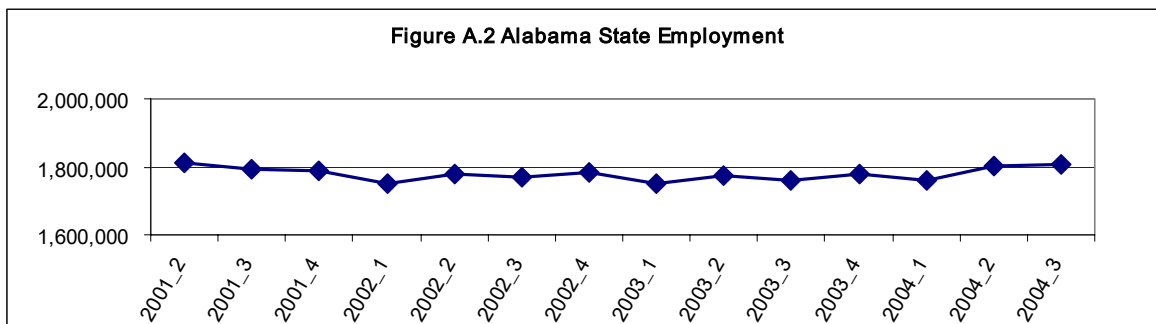
**Table A.1 Alabama Labor Force Information**

	2004			
	Labor Force	Employed	Unemployed	Rate
WIAA Region 1 Area	103,970	97,090	6,880	6.62%
WIAA Region 2 Area	430,908	408,993	21,915	5.09%
WIAA Region 3 Area	126,320	119,505	6,815	5.40%
WIAA Region 4 Area	172,662	165,493	7,169	4.15%
WIAA Region 5 Area	199,131	187,171	11,960	6.01%
WIAA Region 6 Area	43,401	39,421	3,980	9.17%
WIAA Region 7 Area	181,994	171,601	10,393	5.71%
WIAA Region 8 Area	113,192	107,106	6,086	5.38%
WIAA Region 9 Area	121,671	114,244	7,427	6.10%
WIAA Region 10 Area	149,604	141,636	7,968	5.33%
Jefferson Region	325,242	308,135	17,107	5.26%
Mobile Region	180,685	168,929	11,756	6.51%
Alabama	2,148,766	2,029,314	119,452	5.56%
U.S.	147,401,000	139,252,000	8,149,000	5.53%

	2005 August			
	Labor Force	Employed	Unemployed	Rate
WIAA Region 1 Area	104,515	99,611	4,904	4.69%
WIAA Region 2 Area	433,202	416,941	16,261	3.75%
WIAA Region 3 Area	128,357	123,294	5,063	3.94%
WIAA Region 4 Area	172,558	167,042	5,516	3.20%
WIAA Region 5 Area	197,998	189,327	8,671	4.38%
WIAA Region 6 Area	42,361	39,005	3,356	7.92%
WIAA Region 7 Area	184,378	176,517	7,861	4.26%
WIAA Region 8 Area	112,896	107,836	5,060	4.48%
WIAA Region 9 Area	122,576	117,316	5,260	4.29%
WIAA Region 10 Area	149,369	143,530	5,839	3.91%
Jefferson Region	324,901	311,018	13,883	4.27%
Mobile Region	182,636	174,094	8,542	4.68%
Alabama	2,155,745	2,065,528	90,217	4.18%
U.S.	150,469,000	143,142,000	7,327,000	4.87%

Source: Alabama Department of Industrial Relations and U.S. Bureau of Labor Statistics.



Source: Alabama Department of Industrial Relations and U.S. Census Bureau.

## Commuting Patterns

In 2000, more Alabamians commuted out of the state for work than those who commuted in (Table A.2). Commuter outflow exceeded inflow by about 36,700 people. Most of the commuting involved the four neighboring states; Florida, Georgia, Mississippi, and Tennessee. These states accounted for 85 percent or about 35,000 of the inflow and 86 percent (67,000) of the outflow. Georgia alone provided jobs for 51 percent of the out-commuters. About 1,000 of those who commuted out went to other countries.

There was significant commuting inside the state as well. Table A.2 also shows the one-way average commute time and distance for Alabama workers in 2004.<sup>2</sup> The one-way

commute takes less than 20 minutes for 57 percent of workers; between 20 and 40 minutes for 27 percent; and more than 40 minutes for 11 percent. Nearly 2 percent of workers spend more than an hour to get to work. The commute is less than 10 miles for 46 percent of workers and almost 30 percent travel 10 to 25 miles. About 20 percent of workers travel more than 25 miles one-way, with 6 percent exceeding 45 miles. This commuting data suggest that the state's roads and highways must be maintained properly to ensure uninterrupted movement of workers. Impeded movement of workers can delay or slow economic development.

## Population

The Alabama population estimate of about 4.5 million for 2004 is 1.9 percent higher than was recorded for 2000 (Figure A.3 and Table A.3). Population grew faster for four WIAAs than for the state, but population also shrank in four regions. The state population is projected to grow 8.8 percent in this decade to more than 4.8 million by 2010. Population growth in five WIAAs should beat the state's rate. WIAA Region 6 is expected to see its population fall. This may shrink its labor force. If employment growth continues its fast pace,

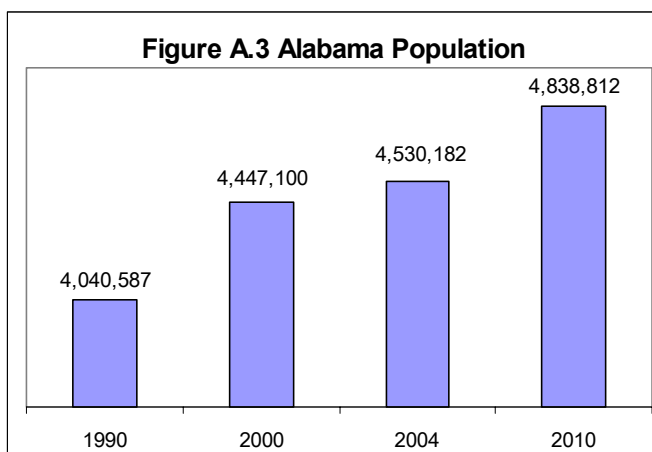
**Table A.2 Commuting Patterns**

Area	Inflow, 2000		Outflow, 2000	
	Number	Percent	Number	Percent
Alabama	41,494	100.0	78,197	100.0
<b>Average commute time (one-way), 2004</b>				
				Percent of workers
Less than 20 minutes				57.3
20 to 40 minutes				27.0
40 minutes to an hour				9.3
More than an hour				1.7
<b>Average commute distance (one-way), 2004</b>				
				Percent of workers
Less than 10 miles				45.9
10 to 25 miles				29.5
25 to 45 miles				13.7
More than 45 miles				6.1

Note: Rounding errors may be present.

Source: U.S. Census Bureau and Alabama Department of Industrial Relations.

**Figure A.3 Alabama Population**



<sup>2</sup> The 2004 commuting data is obtained from a study on underemployment that was commissioned by the state's LMI.



it could reverse the net out-commuting mentioned in the previous section. Communities that experience rapid job gains may need to consider investments in amenities and infrastructure to attract new residents.

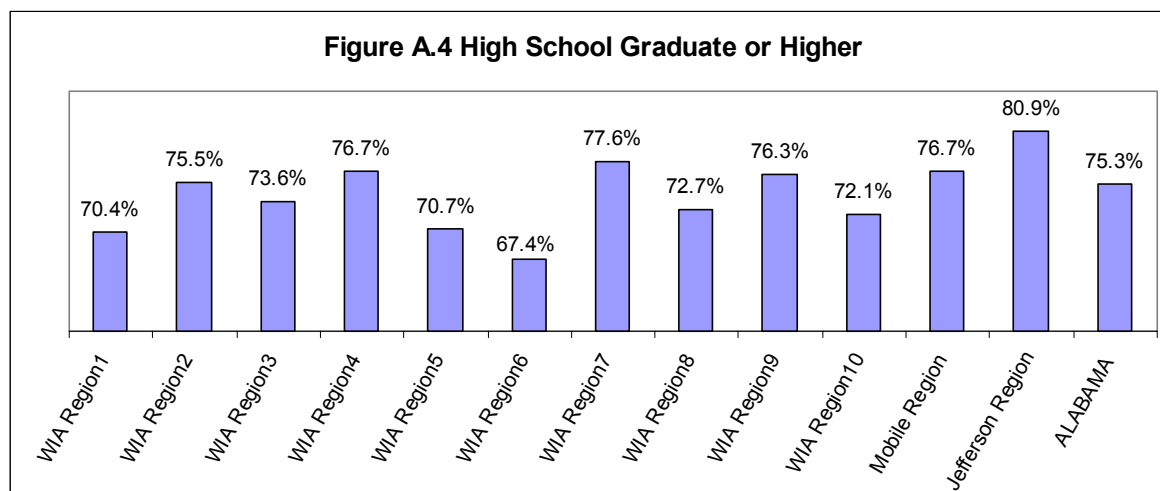
**Table A.3 Population by WIAA**

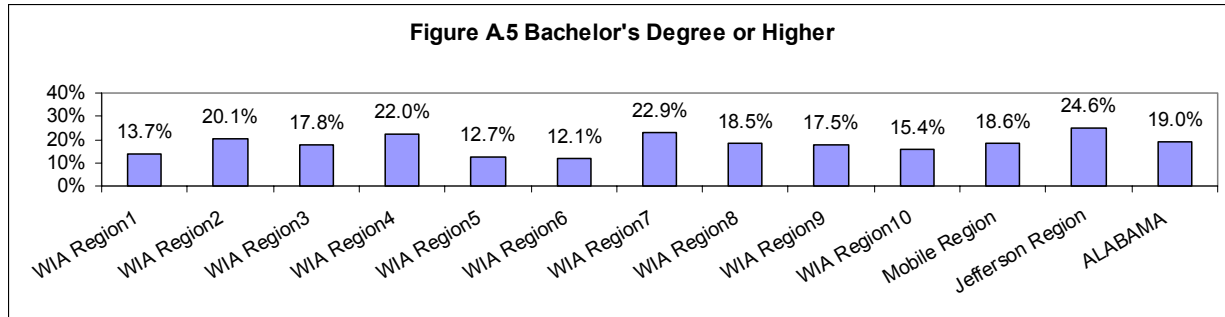
	1990 Census	2000 Census	2004 Estimate	% Change 2000-2004	2010 Projected	% Change 2000-2010
WIAA Region 1	211,024	230,230	227,904	-1.0	246,645	7.1
WIAA Region 2	704,743	817,359	849,802	4.0	923,527	13.0
WIAA Region 3	247,125	268,208	270,091	0.7	285,147	6.3
WIAA Region 4	249,495	318,341	347,393	9.1	391,772	23.1
WIAA Region 5	405,276	424,451	423,859	-0.1	443,826	4.6
WIAA Region 6	129,733	124,668	120,827	-3.1	120,843	-3.1
WIAA Region 7	355,127	381,592	389,555	2.1	421,387	10.4
WIAA Region 8	206,852	237,250	239,951	1.1	265,258	11.8
WIAA Region 9	215,754	263,232	277,543	5.4	311,023	18.2
WIAA Region 10	299,715	319,879	324,236	1.4	337,567	5.5
Mobile Region	378,643	399,843	400,526	0.2	417,520	4.4
Jefferson Region	651,525	662,047	658,495	-0.5	673,771	1.8
Alabama	4,040,587	4,447,100	4,530,182	1.9	4,838,812	8.8
U.S.	248,709,873	281,421,966	296,655,404	5.4	314,571,000	11.8

Source: Center for Business and Economic Research, The University of Alabama and U.S. Census Bureau.

## Educational Attainment

Educational attainment of Alabama residents who are 25 years old and over is shown below in Table A.4 and Figures A.4 and A.5. About 75 percent graduated from high school and 19 percent hold a bachelor's or higher degree. The Jefferson WIAA has the highest educational attainment and WIAA Region 6 has the lowest. Educational attainment is important as skills rise with education and high wage 21st century jobs demand more skill sets.





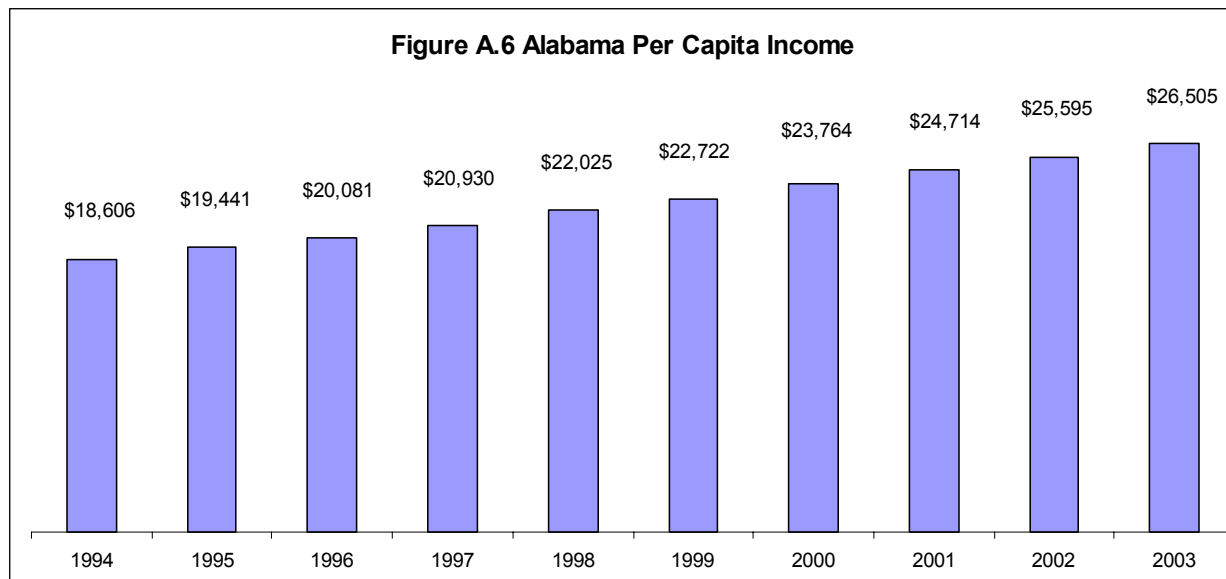
**Table A.4 Educational Attainment in 2000, Population 25 Years and Over**

	WIA Region1	WIA Region2	WIA Region3	WIA Region4	WIA Region5	WIA Region6	WIA Region7
Total	155,827	539,695	166,247	211,107	284,419	77,325	243,326
No schooling completed	1,967	5,681	2,727	2,182	3,544	1,947	2,931
Nursery to 4th grade	1,462	4,358	1,664	1,210	2,224	1,338	1,764
5th and 6th grade	4,382	12,733	3,606	4,132	7,012	2,555	4,103
7th and 8th grade	9,524	25,316	7,197	9,095	15,052	3,708	8,314
9th grade	7,873	22,357	6,669	8,303	14,254	3,318	7,985
10th grade	8,593	24,885	8,076	8,911	16,329	3,687	9,447
11th grade	6,614	20,200	6,892	7,826	13,689	3,864	9,382
12th grade, no diploma	5,725	16,680	7,131	7,550	11,365	4,761	10,594
High school graduate/equivalent	52,095	157,708	52,471	62,503	94,864	25,919	68,487
Some college, less than 1yr	9,904	36,770	9,939	13,275	17,925	4,317	16,590
Some college, 1+ yrs, no degree	19,455	73,529	21,692	29,018	37,586	8,889	35,797
Associate degree	6,928	30,740	8,589	10,712	14,555	3,677	12,120
Bachelor's degree	13,356	71,882	17,921	31,427	21,857	5,839	34,720
Master's degree	5,524	27,777	7,916	10,466	10,256	2,489	15,506
Professional school degree	1,616	5,493	1,909	3,140	2,844	789	3,879
Doctorate degree	809	3,586	1,848	1,357	1,063	228	1,707
	WIA Region8	WIA Region9	WIA Region10	Mobile Region	Jefferson Region	Alabama	
Total	140,299	175,070	209,805	250,122	434,158	2,887,400	
No schooling completed	2,068	1,974	3,493	3,033	4,227	35,774	
Nursery to 4th grade	1,476	1,147	2,309	1,564	1,708	22,224	
5th and 6th grade	3,636	3,292	5,435	3,279	5,904	60,069	
7th and 8th grade	5,941	6,149	10,663	8,846	12,461	122,266	
9th grade	5,405	6,226	8,973	7,988	11,360	110,711	
10th grade	7,040	7,621	9,861	10,421	13,932	128,803	
11th grade	6,181	7,189	9,311	10,826	14,635	116,609	
12th grade, no diploma	6,517	7,890	8,423	12,266	18,723	117,625	
High school graduate/equivalent	41,186	57,662	63,266	79,822	121,233	877,216	
Some college, less than 1yr	8,737	11,262	15,037	16,388	27,914	188,058	
Some college, 1+ yrs, no degree	18,205	24,531	27,879	35,788	70,628	402,997	
Associate degree	7,904	9,518	12,821	13,276	24,600	155,440	
Bachelor's degree	14,740	19,595	21,070	30,499	68,866	351,772	
Master's degree	7,285	7,906	8,262	10,782	23,560	137,729	
Professional school degree	1,508	2,247	2,284	3,586	10,532	39,827	
Doctorate degree	2,470	861	718	1,758	3,875	20,280	

Source: Center for Business and Economic Research, The University of Alabama and U.S. Census Bureau.

## Per Capita Income

Per capita income (PCI) in Alabama was at \$26,505 in 2003 (Figure A.6), up by about 42.5 percent from 1994. The Jefferson WIAA had the highest PCI with \$34,323 followed by Region 4 with \$28,495; Regions 2 and 7 also had higher PCIs than the Alabama state average. WIAA Region 6 had the lowest PCI with \$20,844.



Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research, The University of Alabama.

## Underemployment and Available Labor

Labor force data are often limited to information on the employed and the unemployed that is available from government sources. However, this information is not complete from the perspective of employers. New or expanding employers are also interested in underemployment because current workers are potential employees. In fact, experience requirements in job ads are evidence that many prospective employers look beyond the unemployed for workers.

Workers in occupations that underutilize their experience, training, and skills are underemployed. These workers might look for other work because their current earnings are below what they believe they can get or because they wish to not be underemployed. Underemployment occurs for various reasons including (i) productivity growth, (ii) spousal employment and income, and (iii) family constraints or personal preferences. The various contributing factors combined with economic, social, and geographic characteristics of areas make underemployment unique to areas.

The existence of underemployment identifies economic potential that is not being realized. It is extremely difficult to measure this economic potential because of uncertainties regarding additional income that the underemployed can bring to an area. It is clear, however, that underemployment provides opportunities for selective job creation and economic growth. A business that needs skills prevalent among the underemployed could locate in WIAAs with such workers regardless of those areas' unemployment rates. A low unemployment rate, which may falsely suggest limited labor availability, is not a hindrance to the business.

The underemployed present a significant pool of labor because they tend to respond to job opportunities that they believe are better for reasons that include (i) higher income, (ii) better benefits, (iii) better terms and conditions of employment, and (iv) better match with skills, training, and experience. The underemployed also create opportunities for entry level workers as they leave lower-paying jobs for better-paying ones. Even if their previously held positions are lost or not filled (perhaps due to low unemployment), there is economic growth in gaining higher-paying jobs. Such income growth boosts consumption, savings, and tax collections. Quantifying the size of the underemployed is a necessary first step in exploiting it for economic development, workforce training, planning, and other uses.

The Alabama underemployment rate was 24 percent in 2004. Applying this rate to August 2005 labor force data means that about 495,700 employed Alabama residents were underemployed (Table A.5). Adding the unemployed gives a total available labor pool of about 586,000 for the state. This pool is about 6.5 times the number of unemployed and is a more realistic measure of the available labor in the state. However, prospective employers must be able to offer the underemployed higher wages, better benefits or terms of employment, or some other incentives to induce them to change jobs. Among the WIAAs, the underemployment rate ranges from 19.4 percent for Region 1 to 28.5 percent for Region 6. WIAA Region 2 has the highest available labor, followed by Jefferson. These two areas account for a third of the state's available labor pool.

**Table A.5 Underemployed and Available Labor by WIAA**

	<u>Alabama</u>	<u>Region 1</u>	<u>Region 2</u>	<u>Region 3</u>	<u>Region 4</u>	<u>Region 5</u>	<u>Region 6</u>
Labor Force	2,155,745	104,515	433,202	128,357	172,558	197,998	42,361
Employed	2,065,528	99,611	416,941	123,294	167,042	189,327	39,005
Underemployment rate	24.0%	19.4%	21.7%	26.2%	25.2%	23.6%	28.5%
Underemployed workers	495,727	19,325	90,476	32,303	42,095	44,681	11,116
Unemployed	90,217	4,904	16,261	5,063	5,516	8,671	3,356
<b>Available labor pool</b>	<b>585,944</b>	<b>24,229</b>	<b>106,737</b>	<b>37,366</b>	<b>47,611</b>	<b>53,352</b>	<b>14,472</b>
	<u>Region 7</u>	<u>Region 8</u>	<u>Region 9</u>	<u>Region 10</u>	<u>Jefferson</u>	<u>Mobile</u>	
Labor Force	184,378	112,896	122,576	149,369	324,901	182,636	
Employed	176,517	107,836	117,316	143,530	311,018	174,094	
Underemployment rate	26.8%	26.6%	22.8%	22.2%	22.5%	24.6%	
Underemployed workers	47,307	28,684	26,748	31,864	69,979	42,827	
Unemployed	7,861	5,060	5,260	5,839	13,883	8,542	
<b>Available labor pool</b>	<b>55,168</b>	<b>33,744</b>	<b>32,008</b>	<b>37,703</b>	<b>83,862</b>	<b>51,369</b>	

Note: Rounding errors may be present. Based on August 2005 labor force data and 2004 underemployment rates.

Source: Center for Business and Economic Research, The University of Alabama and Alabama Department of Industrial Relations.

## Workforce Demand

### Industry Mix

The manufacturing sector was the leading employer with about 292,200 jobs in the second quarter of 2004 (Table A.6). Rounding up the top five industries by employment are retail trade, health care and social assistance, educational services, and accommodation and food services. These five industries provided 1,042,134 jobs, about 58 percent of the state total.

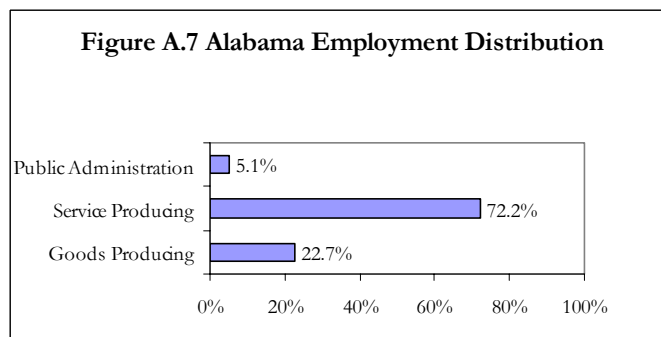
**Table A.6 Industry Mix (2<sup>nd</sup> Quarter 2004)**

Industry by 2-digit NAICS Code	Total Employment	Share	Rank	Average Monthly Wage	Average Monthly New Hire Earnings
11 Agriculture, Forestry, Fishing and Hunting	13,519	0.8%	18	\$2,284	\$1,825
21 Mining	7,422	0.4%	20	\$4,669	\$3,885
22 Utilities	20,151	1.1%	16	\$4,438	\$2,820
23 Construction	96,164	5.3%	6	\$2,846	\$2,281
31-33 Manufacturing	292,193	16.2%	1	\$3,288	\$2,410
42 Wholesale Trade	79,770	4.4%	10	\$3,582	\$2,713
44-45 Retail Trade	237,183	13.2%	2	\$1,929	\$1,393
48-49 Transportation and Warehousing	53,503	3.0%	12	\$2,848	\$2,312
51 Information	32,206	1.8%	14	\$3,471	\$3,268
52 Finance and Insurance	74,021	4.1%	11	\$3,626	\$3,047
53 Real Estate and Rental and Leasing	26,554	1.5%	15	\$2,459	\$1,754
54 Professional, Scientific, and Technical Services	91,886	5.1%	9	\$4,152	\$3,207
55 Management of Companies and Enterprises	11,167	0.6%	19	\$3,517	\$2,932
56 Administrative and Support and Waste Management and Remediation Services	95,365	5.3%	7	\$1,980	\$1,557
61 Educational Services	160,179	8.9%	4	\$2,577	\$1,252
62 Health Care and Social Assistance	210,009	11.7%	3	\$2,697	\$1,999
71 Arts, Entertainment, and Recreation	16,537	0.9%	17	\$1,574	\$1,156
72 Accommodation and Food Services	142,570	7.9%	5	\$1,162	\$854
81 Other Services (except Public Administration)	48,523	2.7%	13	\$2,048	\$1,610
92 Public Administration	92,230	5.1%	8	\$2,747	\$1,660
<b>ALL INDUSTRIES</b>	<b>1,801,152</b>	<b>100.0%</b>		<b>\$2,700</b>	<b>\$2,197</b>

Source: Alabama Department of Industrial Relations and U.S. Census Bureau.

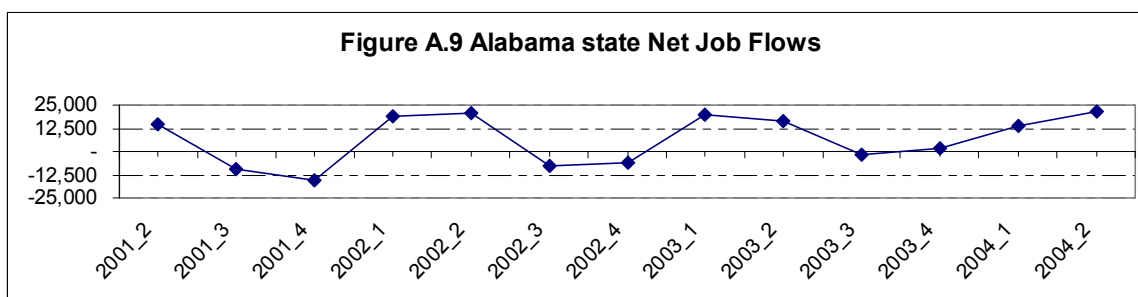
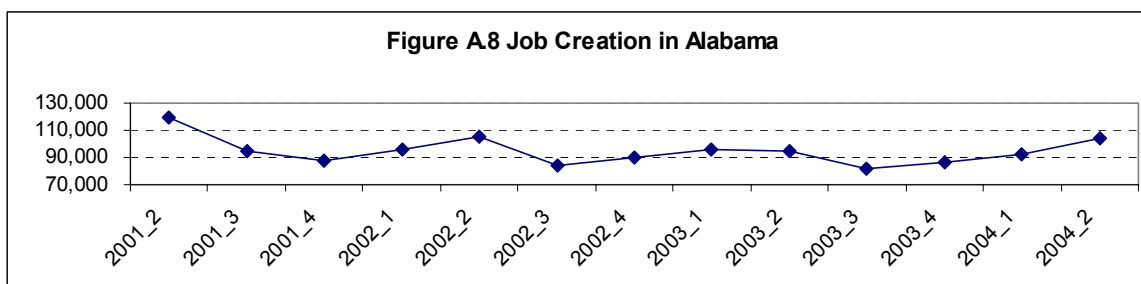
The average monthly wage across all industries in the state was just about \$2,700. New hire monthly earnings roughly averaged \$2,200 or 81 percent of the average monthly wage. The highest average monthly wages were for mining at \$4,669, utilities \$4,438, and professional, scientific, and technical services \$4,152. Accommodation and food services paid the least at \$1,162. Mining also had the highest average monthly new hire wages with \$3,885. Information was next with \$3,268 followed closely by professional, scientific, and technical services with \$3,207. Accommodation and food services paid the least with \$854.

The leading employers are not the highest paying sectors. Indeed, of the top five employers, only manufacturing paid wages above the state averages. The smallest employer, mining, paid the highest wages. By broad industry classification, service producing industries provided 72 percent of total state jobs in second quarter 2004. Goods producing industries were next with about 23 percent and public administration 5 percent. The distribution is for all jobs and there is significant variation by WIAA.



### Job Creation and Net Job Flows

On average, about 94,800 jobs were created per quarter from second quarter 2001 to second quarter 2004. Figure A.8 shows a downward trend for job creation over the period, but a clear turnaround since the third quarter of 2003. Quarterly net job flows averaged about 6,700 in the same period and follows the job creation trend (Figure A.9). Net job flows have ranged from a loss of about 15,400 to a gain of almost 21,900. Net job flows clearly fluctuate greatly but 2005 hiring activity is quite encouraging. Job creation refers to the number of new jobs that are created either by new area businesses or through the expansion of existing firms. Net job flows reflect the difference between current and previous employment at all businesses.



Source: Alabama Department of Industrial Relations and U.S. Census Bureau.

## High-Demand Occupations

Table A.7 shows the top 36 of more than 700 occupations ranked by projected demand for jobs. Many of these occupations are common to the top five employment sectors identified earlier: manufacturing; retail trade; health care and social assistance; educational services; and accommodation and food services. Thus these sectors will continue to dominate employment in the state. The top five high-demand occupations are Cashiers; Retail Salespersons; Food Preparation and Serving Workers; Waiters and Waitresses; and Laborers and Freight, Stock, and Material Movers, Hand.

**Table A.7 Selected High-Demand Occupations (Base Year 2002 and Projected Year 2012)**

Occupation	Annual Average Job Openings		
	Total	Due to Growth	Due to Separations
Cashiers	3,990	765	3,225
Retail Salespersons	3,320	835	2,485
Food Preparation and Serving Workers	2,610	845	1,765
Waiters and Waitresses	2,475	550	1,925
Laborers and Freight, Stock, and Material Movers, Hand	1,835	200	1,635
Registered Nurses	1,615	850	765
Office Clerks, General	1,595	510	1,085
General and Operations Managers	1,540	600	940
Truck Drivers, Heavy and Tractor-Trailer	1,370	735	635
Janitors and Cleaners, Except Maids	1,075	460	615
Sales Representatives, Except Technical and Scientific Products	1,060	475	585
Bookkeeping, Accounting, and Auditing Clerks	1,020	290	730
First-Line Supervisors of Retail Sales Workers	1,015	430	585
Teacher Assistants	985	490	495
Secretaries, Except Legal, Medical, and Executive	980	155	825
Customer Service Representatives	900	490	410
Nursing Aides, Orderlies, and Attendants	890	530	360
Maids and Housekeeping Cleaners	880	460	420
Child Care Workers	830	315	515
Team Assemblers	820	280	540
Elementary School Teachers, Except Special Education	815	375	440
Licensed Practical and Licensed Vocational Nurses	800	370	430
Security Guards **	725	390	335
Maintenance and Repair Workers, General	720	315	405
Receptionists and Information Clerks **	695	370	325
First-Line Supervisors of Office and Administrative Support Workers	675	210	465
Secondary School Teachers, Except Special Education	625	250	375
Landscaping and Groundskeeping Workers	590	225	365
Automotive Service Technicians and Mechanics	575	205	370
Accountants and Auditors	560	235	325
Cooks, Institution and Cafeteria	545	180	365
Packers and Packagers, Hand	540	250	290
Carpenters	530	245	285
Tellers	515	120	395
Electricians	495	265	230
Counter and Rental Clerks **	475	205	270

Note: A minimum of 475 average annual job openings is used as selection criterion and data are rounded to nearest 5.

\*\* Qualify as both high-demand and fast-growing occupations.

Source: Alabama Department of Industrial Relations.

## Fast-Growing Occupations

The top 35 of occupations ranked by projected growth of employment are listed in Table A.8. Many of these occupations are health or computer related. The top five high growth occupations are Medical Assistants; Veterinary Technologists and Technicians; Home Health Aides; Medical Records and Health Information Technicians; and Network Systems & Data Communications Analysts. A comparison of Tables A.7 and A.8 identifies three occupations that are both high-demand and fast-growing: Counter and Rental Clerks; Receptionists and Information Clerks; and Security Guards. Home Health Aides with 465 annual job openings can be added to this group.

**Table A.8 Selected Fast-Growing Occupations (Base Year 2002 & Projected Year 2012)**

Occupation	Employment		Percent Change	Annual Growth (Percent)	Total Annual Average Job Openings
	2002	2012			
Medical Assistants	3,410	5,160	51.3	4.23	240
Veterinary Technologists and Technicians	610	910	49.2	4.08	40
Home Health Aides **	7,480	11,140	48.9	4.06	465
Medical Records and Health Information Technicians	2,280	3,330	46.1	3.86	140
Network Systems and Data Communications Analysts	1,410	2,050	45.4	3.81	80
Personal and Home Care Aides	3,880	5,490	41.5	3.53	220
Computer Software Engineers, Systems Software	2,440	3,430	40.6	3.46	125
Computer Software Engineers, Applications	3,260	4,560	39.9	3.41	160
Counselors, Social, and Religious Workers, All Other	3,180	4,420	39.0	3.35	185
Dental Hygienists	2,170	3,010	38.7	3.33	105
Dental Assistants	3,030	4,190	38.3	3.29	200
Fitness Trainers and Aerobics Instructors	2,100	2,900	38.1	3.28	130
Social and Human Service Assistants	3,820	5,240	37.2	3.21	205
Residential Advisors	620	850	37.1	3.21	40
Database Administrators	860	1,170	36.0	3.13	40
Physical Therapist Assistants	890	1,210	36.0	3.12	45
Aircraft Mechanics and Service Technicians	3,380	4,560	34.9	3.04	200
Emergency Medical Technicians and Paramedics	2,870	3,850	34.1	2.98	135
Preschool Teachers, Except Special Education	4,790	6,410	33.8	2.96	230
Public Relations Managers	2,330	3,110	33.5	2.93	120
Occupational Therapists	810	1,080	33.3	2.92	35
Paralegals and Legal Assistants	1,840	2,450	33.2	2.90	75
Directors, Religious Activities and Education	3,300	4,330	31.2	2.75	140
Veterinary Assistants and Laboratory Animal Caretakers	1,410	1,850	31.2	2.75	70
Pharmacists	3,950	5,180	31.1	2.75	200
Network and Computer Systems Administrators	2,120	2,780	31.1	2.75	90
Desktop Publishers	580	760	31.0	2.74	35
Computer Support Specialists	5,690	7,410	30.2	2.68	240
Physical Therapists	1,490	1,940	30.2	2.67	60
Security Guards **	13,140	17,060	29.8	2.65	725
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	5,740	7,450	29.8	2.64	245
Manufactured Building and Mobile Home Installers	720	930	29.2	2.59	40
Counter and Rental Clerks **	7,100	9,160	29.0	2.58	475
Pharmacy Technicians	4,020	5,180	28.9	2.57	165
Construction Trades and Related Workers, All Other	1,030	1,320	28.2	2.51	45
Self-Enrichment Education Teachers	640	820	28.1	2.51	30
Receptionists and Information Clerks **	13,190	16,880	28.0	2.50	695

Note: Selection criteria were a minimum of 30 average annual job openings and at least 2.50 percent annual growth rate. Employment level data are rounded to the nearest 10 and job openings data are rounded to nearest 5.

\*\* Qualify as both high-demand and fast-growing occupations. Home Health Aides missed Table A.7 by just 10 average annual job openings.

Source: Alabama Department of Industrial Relations.



## High-Earning Occupations

Any discussion of earnings must consider that wages vary with experience. Occupations with the highest entry wages may not necessarily have the highest average or experienced wages. Table A.9 shows 50 selected highest earning Alabama occupations. In general, the selected highest earning occupations are in health, legal, management, engineering, computer, and science fields. The top 10 are all health occupations.

The selected high-earning occupations are generally not fast-growing or high-demand. Only one high-earning occupation, General and Operations Managers, is in the high-demand category. The following three occupations are both fast-growing and high-earning: Pharmacists; Computer Software Engineers, Systems Software; and Computer Software Engineers, Applications.

## Other Workforce Issues

### Available Labor

Employment is a critical input to economic development. As such, the availability of labor is very important. Alabama currently has a low unemployment rate, but there is a large available labor pool, 586,000-strong, that is looking for better jobs, typically higher-wage ones. This pool is made up of 90,217 unemployed and 495,727 underemployed.

The underemployed component of the state's available labor pool consists of people who are willing to commute farther and longer, some for 20 or more minutes longer and 20 or more extra miles. A lack of job opportunities in their areas, low wages at available jobs, and living too far from those jobs are the primary reasons given for being underemployed. Ongoing economic development efforts will help in this regard.

People who do not work also cite lack of job opportunities in their areas as one major reason for not working. Such workers may become part of the labor force if that problem can be addressed. Thus the state's available labor force could be bigger than estimated in this report. Employment seems to be growing faster than the labor force. Higher employment demand could be alleviated somewhat with in-commuting. However, availability of jobs presents communities with opportunities to attract new residents. Some communities must be prepared to invest in amenities and infrastructure to support such growth because immigration is generally more beneficial to communities than in-commuting.

Immigration is one way of growing the labor force through growth in the population. The state's population growth rate is low relative to the nation's rate and this is expected to continue through 2010. This low population growth rate may hinder the ability to meet the expected jobs demand barring future economic slowdowns. Another strategy to expand the labor force to meet this demand is to focus on hard-to-serve populations.

**Table A.9 Selected High-Earning Occupations**

Occupation	Employment	Mean Annual Salary (\$)
Anesthesiologists	NA	196,980
Orthodontists	NA	192,590
Oral and Maxillofacial Surgeons	NA	182,060
Surgeons	720	180,860
Obstetricians and Gynecologists	340	176,010
Internists, General	720	169,750
Family and General Practitioners	1,010	146,370
Pediatricians, General	730	144,580
Podiatrists	NA	142,670
Psychiatrists	160	137,200
Chief Executives	3,640	135,300
Dentists, General	610	134,410
Law Teachers, Postsecondary	90	111,970
Lawyers	5,550	106,930
Administrative Law Judges, Adjudicators, and Hearing Officers	110	103,560
Engineering Managers	2,800	96,200
Physicists	170	93,970
Computer and Information Scientists, Research	340	90,460
Natural Sciences Managers	210	88,800
Personal Financial Advisors	1,000	88,050
General and Operations Managers	26,270	85,820
Aerospace Engineers	2,800	84,340
Mathematicians	10	83,370
Pharmacists	4,300	83,080
Actuaries	NA	82,680
Chiropractors	340	82,510
Optometrists	270	81,810
Real Estate Brokers	170	81,720
Air Traffic Controllers	230	81,250
Computer and Information Systems Managers	2,790	81,080
Health Specialties Teachers, Postsecondary	1,260	80,930
Marketing Managers	1,390	79,440
Computer Hardware Engineers	930	79,410
Sales Managers	2,970	78,960
Electronics Engineers, Except Computer	2,020	78,690
Securities, Commodities, and Financial Services Sales Agents	1,940	78,460
Environmental Engineers	810	76,960
Computer Software Engineers, Systems Software	2,400	76,790
Chemical Engineers	600	76,500
Materials Scientists	40	76,130
Financial Managers	4,950	76,000
Airline Pilots, Copilots, and Flight Engineers	280	74,870
Materials Engineers	370	73,380
Atmospheric and Space Scientists	140	73,010
Medical and Health Services Managers	2,740	72,930
Electrical Engineers	3,130	72,900
Purchasing Managers	870	72,490
Engineering Teachers, Postsecondary	800	72,320
Petroleum Engineers	20	71,910
Computer Software Engineers, Applications	3,470	71,700

Note: Only the 50 highest earning single occupations are presented. The list does not include occupations that are affected by confidentiality. Some high-earning occupational groups are not listed because earnings can vary considerably for occupations within these groups. Employment and salaries data are rounded to the nearest 10. The data provided are based on the November 2004 release of the Occupational Employment Statistics (OES) combined employment and wage file. Estimates for specific occupations may include imputed data.

"NA" indicates data items that are not publishable or not available.

Source: Center for Business and Economic Research, The University of Alabama and Alabama Department of Industrial Relations.

Hard-to-serve populations include persons in poverty, those receiving welfare, those in sparsely populated areas, and those on active parole. These populations are often outside of the mainstream economy and poor (e.g. out-of-school youth). They usually have difficulty finding work because they have low levels of educational attainment, lack occupational skills, or face geographic or other barriers. They are a potential human resource and some investment in training, transportation, child care, infrastructure, etc. may be needed to tap this resource. WIAA Region 6 may be one such area.

## **Skills**

Jobs require skill sets and it is necessary that jobholders have the relevant skills. High earning occupations typically require more complex skills, which are obtained in the pursuit of the high educational attainment levels that such jobs require. Low earning occupations require fewer and more basic skill sets; some such occupations have no minimum skill set requirements (e.g. dishwashers and maids).

Table A.10 shows the percentage of selected occupations in Alabama that list a particular skill as primary. We define a primary skill as one in the top 10 of the required skill set for an occupation. O\*NET Online provides skill sets for all occupations ranked by the degree of importance. Thus primary skills are more important than other skills. It is important to note that a particular skill may be more important and more extensively used in one occupation than another. Table A.10 does not address such cross-occupational skill importance comparisons.

In general, basic skills are most frequently listed as primary. However, science is primary for more selected high-earning occupations than selected fast-growing and selected high-demand occupations. A similar pattern holds for critical thinking, complex problem solving, and systems skills. These skills require longer training periods and postsecondary education. The high-demand and high-growth occupations in the state are dominated by occupations such as Cashiers; Retail Salespersons; Combined Food Preparation and Serving Workers; Medical Assistants; Veterinary Technologists and Technicians; and Home Health Aides. The most relevant skills for such occupations are active listening, reading comprehension, speaking, writing, and service orientation.

## **Education and Training Issues**

Educational attainment in Alabama is low compared to the nation as a whole. Seventy-five percent of Alabamians age 25 and over have graduated from high school, compared to 80.4 percent for the nation. Of that population, 19 percent of Alabamians have bachelor's or higher degree; 24.4 percent of Americans do. The Jefferson WIAA has the highest educational attainment level in the state, 81 percent high school graduates and 25 percent bachelor's or higher degree holders. Skill and education requirements for jobs keep rising. This highlights a strong need to raise educational attainment in the state.

Table A.11 shows the number of selected occupations in Alabama for which a particular education/training category is most common. In general, high-earning occupations require high educational attainment levels, typically a bachelor's or higher degree. A postsecondary educational attainment is the minimum education and training requirement for most fast-growing occupations; about 30 percent of the selected fast-growing occupations require bachelor's or higher degrees. Thus the jobs of the future will be requiring a minimum of some postsecondary education and

training. Most high-demand jobs do not require postsecondary training. However, graduation from high school is increasingly becoming a requirement as is evident in many ads for such jobs.

**Table A.10 Share of Selected Occupations for Which Skill Is Primary**

	Selected High-Demand Occupations	Selected Fast-Growing Occupations	Selected High-Earning Occupations
<b>Basic Skills</b>			
Active Learning	36%	69%	84%
Active Listening	83%	86%	80%
Critical Thinking	61%	77%	94%
Learning Strategies	33%	31%	12%
Mathematics	31%	14%	38%
Monitoring	42%	26%	30%
Reading Comprehension	78%	94%	90%
Science	0%	9%	44%
Speaking	67%	77%	68%
Writing	36%	57%	40%
<b>Complex Problem Solving Skills</b>			
Complex Problem Solving	3%	17%	44%
<b>Resource Management Skills</b>			
Management of Financial Resources	3%	0%	14%
Management of Material Resources	3%	0%	2%
Management of Personnel Resources	8%	0%	8%
Time Management	50%	60%	38%
<b>Social Skills</b>			
Coordination	31%	43%	32%
Instructing	31%	54%	16%
Negotiation	6%	0%	12%
Persuasion	6%	3%	14%
Service Orientation	36%	43%	10%
Social Perceptiveness	47%	51%	10%
<b>Systems Skills</b>			
Judgment and Decision Making	22%	20%	76%
Systems Analysis	0%	6%	10%
Systems Evaluation	3%	0%	24%
<b>Technical Skills</b>			
Equipment Maintenance	11%	11%	0%
Equipment Selection	17%	20%	10%
Installation	14%	11%	0%
Operation and Control	8%	3%	8%
Operation Monitoring	6%	3%	6%
Operations Analysis	3%	9%	16%
Programming	0%	6%	6%
Quality Control Analysis	3%	6%	2%
Repairing	14%	6%	0%
Technology Design	0%	9%	12%
Troubleshooting	11%	23%	14%
Note: Definitions for skill types and skills are available at <a href="http://online.onetcenter.org/skills/">http://online.onetcenter.org/skills/</a>			
Source: O*NET Online and Center for Business and Economic Research, The University of Alabama.			

**Table A.11 Number of Selected Occupations with Most Common Education/Training Requirement**

Most Common Education/Training Requirements Categories	Selected High-Demand Occupations	Selected Fast-Growing Occupations	Selected High-Earning Occupations
First Professional Degree		1	16
Doctoral Degree			3
Master's Degree		1	2
Work Experience Plus a Bachelor's or Higher Degree	1	1	12
Bachelor's Degree	3	7	15
Associate Degree	1	6	
Postsecondary Vocational Training	2	5	
Work Experience in a Related Occupation	2	1	1
Long-term On-the-job Training	2	1	1
Moderate On-the-job Training	8	6	
Short-term On-the-job Training	17	6	

Note: The last three education and training requirements categories are based on the length of time it generally takes an average worker to achieve proficiency for occupations in which postsecondary training is usually not needed for entry. **Long-term** requires more than 12 months on-the-job training that can include up to four years of apprenticeship, formal classroom instruction, and short-term employer-sponsored training. Trainees are generally considered to be employed in the occupation. **Moderate-term** requires one to 12 months on-the-job experience and informal training. **Short-term** requires up to one month on-the-job experience and training.

Source: O\*NET Online; Center for Business and Economic Research, The University of Alabama; and Alabama Department of Industrial Relations.

The finding that basic skills are important—for high-demand, high-growth, and high-earning jobs—presents a challenge for workforce development. It indicates a strong need for training in these skills. Ideally, all high school graduates should possess basic skills so that postsecondary and higher education can focus on other and more complex skill types while enhancing basic skills. Employers should be an integral part of planning for training as they can point out the skill needs of the future and any existing gaps.<sup>3</sup>

High-earning occupations make up a small component of total employment and jobs offered by top employers in the state. Diversifying the state's economy would strengthen it. This means that economic development should also focus on retaining, expanding, and attracting businesses that provide more high-earning jobs. Such a focus would require that workforce development pay attention to postsecondary and higher educational systems to ensure a ready and available workforce for these businesses. The higher incomes to graduates of these institutions would help raise personal income for the state. Raising personal income by improving educational attainment and technological skills for a state that has low population and labor force growth rates is an effective economic development strategy. Workforce retraining is another strategy.

A highly educated and productive workforce is a critical economic development asset. Together, workforce development and economic development can provide this asset and build a strong well-diversified state economy. Indeed, one cannot achieve success without the other.

<sup>3</sup> At the time of this writing, the state's LMI was preparing a "skills projections" report to complement its occupational projections, which would be made available on its website at <http://www2.dir.state.al.us/>